

CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A non-contact electrical toggle switch, comprising:
 - an electronic switching element;
 - a motion detection element configured to detect two independent movements which mimic the movements required to physically switch a conventional toggle switch, wherein the mimicking includes the movement characteristics of duration, direction, and distance; and
 - if the motion detection element detects one of the two movements, causing the electronic switching element to switch between a first and second electrical state in a manner which corresponds to how a conventional toggle switch would operate in response to the detected movement.
2. (previously presented) A non-contact electrical toggle switch of claim 1, wherein the motion detection element includes:
 - at least two emitters; and
 - at least one detector.
3. (previously presented) The non-contact electrical toggle switch of claim 2, wherein the at least two emitters are in substantial vertical alignment with one another.
4. (previously presented) The non-contact electrical toggle switch of claim 3, wherein the at least one detector is positioned between the at least two emitters.

5. (previously presented) The non-contact electrical toggle switch of claim 1, wherein the motion detection element is configured to only sense the two movements within about one-half inch to about six inches of the motion detection element.
6. (previously presented) The non-contact electrical toggle switch of claim 1, further comprising:
 - at least one visible switch state indicator which is configured to change state in manner to provide visual feedback to an operator.
7. (previously presented) The non-contact electrical toggle switch of claim 6, wherein the at least one visible switch state indicator comprises a pair of visible switch state indicators.
8. (previously presented) The non-contact electrical toggle switch of claim 7, wherein each switch state indicator of the pair of switch state indicators comprises a light-emitting diode.
9. (previously presented) The non-contact electrical toggle switch of claim 1, further comprising:
 - an audio element configured to output an audible signal when one of the two movements are detected by the motion detection element.
10. (previously presented) A non-contact electrical toggle switch, comprising:
 - at least one processor;
 - an electronic switching element in communication with the at least one processor;
 - a pair of substantially aligned emitters configured to emit electromagnetic radiation, each emitter of the pair in communication with and under control of the at least one processor;
 - at least one detector positioned between the emitters of the pair and in substantial alignment therewith, the at least one detector configured to detect electromagnetic radiation of at least one wavelength emitted by the emitters, the at least one detector in communication with the at least one processor so as to change a state of the electronic switching element upon detection of a movement which mimics a movement required to

physically switch a conventional toggle switch, wherein the mimicking includes the movement characteristics of duration, direction, and distance, by the at least one detector, wherein the state of the electronic switching element is changed in a manner which corresponds to how a conventional toggle switch would respond to the detected movement.

11. (previously presented) The non-contact electrical toggle switch of claim 10, wherein the electronic switching element comprises an optically coupled triac.

12. (previously presented) The non-contact electrical toggle switch of claim 10, wherein the pair of substantially aligned emitters or the at least one detector is configured such that that at least one detector will sense the movement when effected within about six inches thereof.

13. (previously presented) The non-contact electrical toggle switch of claim 10, further comprising:

at least one visible switch state indicator.

14. (previously presented) The non-contact electrical toggle switch of claim 10, further comprising:

an audio element configured to output an audible signal when the movement is detected by the at least one detector.

15. (previously presented) A method for switching a state of an electrical circuit, comprising:

effecting a movement which mimics a movement required to physically switch a conventional toggle switch, wherein the mimicking includes the movement characteristics of duration, direction, and distance, in front of a non-contact electrical switch;

detecting the movement;

timing the movement;

determining whether the timing of the movement occurs within a predetermined time range;

determining whether the movement is effected in a direction which corresponds to a change in the state of the electrical circuit; and

switching the state of the electrical circuit when the movement occurs within the predetermined time range and is effected in a direction that corresponds to a change in the state of the electrical circuit, wherein the state of the electronic switching element is changed in a manner which corresponds to how a conventional toggle switch would respond to the detected movement.

16. (original) The method of claim 15, wherein switching the state of the electrical circuit comprises opening or closing the electrical circuit.
17. (previously presented) The method of claim 15, wherein the movement is only detected if performed within a predetermined distance from the non-contact electrical switch.
18. (previously presented) The method of claim 15, further comprising:
visibly indicating a switch state of the non-contact electrical switch.
19. (previously presented) The method of claim 18, further comprising:
altering a visible indication of the switch state of the non-contact electrical switch when the state of the electrical circuit is changed.
20. (original) The method of claim 15, further comprising:
generating an audible signal when the state of the electrical circuit is changed.
21. (withdrawn) The non-contact electrical toggle switch of claim 1, wherein the motion detection element is also configured to sense an opposite substantially linear movement and, upon sensing the opposite substantially linear movement, to cause the electronic switching element to switch between the second state and the first state.

22. (withdrawn) The non-contact electrical toggle switch of claim 21, wherein the substantially linear movement on is an upward motion and the second state is an “on” state; and the opposite substantially linear movement is a downward motion and the first state is an “off” state.

23. (previously presented) The non-contact electrical toggle switch of claim 1, wherein the motion detection element is configured to sense a substantially linear movement that substantially emulates movement for changing a state of a conventional toggle light switch.

24. (previously presented) The non-contact electrical toggle switch of claim 9, wherein the audible signal includes at least two independent audible signals which correspond to the two movements.

25. (previously presented) The non-contact electrical toggle switch of claim 1, wherein the first and second electrical states correspond to an on and off state, and wherein the two movements include an upward “on” movement and a downward “off” movement.

26. (previously presented) The non-contact electrical toggle switch of claim 1, wherein the detection element is further configured to detect two independent dimming movements which cause the electronic switching element to perform one of two independent dimming functions respectively.

27. (currently amended) The non-contact electrical toggle switch of claim 26, wherein the two dimming movements include an on dimming movement and an off dimming movement, and wherein the on dimming movement causes the electrical switching element to reduce resistance and the off dimming movement causes the electrical switching element to increase resistance.